

Table of Characteristics of Centralized and Decentralized Cookstove Enterprises (Version 1.0) (Updates at www.drTLUD.com)

Location and output characteristics

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A	Categories	Centralized fully		Mixed centrality			Decentralized fully
B	Geographic scope (Population guide)	World (Billions of people)	Regional (incl over 100 million pop.)	National (1 to 100 million)	District / Province (10 K to 1 million)	Town and Village (200 to 20 K)	Family and Personal (under 200 & DIY)
C	Materials availability	Single source <i>Special clay/metal</i>	Several sources <i>Steel production</i>	Market sources <i>Steel supply</i>	Market sources <i>Retail hardware</i>	Retail and local <i>New + Scrap / clay</i>	Ubiquitous. 3 stones <i>mud, scrap, retail</i>
D	Production capacity per location <i>Examples (aspiring)</i>	5000 per day = 1.2 million per yr <i>Stove Tec / Zoom</i>	2500 per day = 500,000 per yr <i>Burn Mfg (E. Afr.)</i>	1,000 per day = 250,000 per yr <i>(need example)</i>	50 per day = 12,500 per yr <i>Dr TLUD Associates</i>	2 per day = 500 per yr <i>(need example)</i>	1 per month or as needed <i>Exists “naturally”</i>
E	Production sites	1 to 10	5 to 50	20 to 500	100 to 10,000	50,000 to 1 million	Hundreds of millions
F	Row D times Row E	Any 1 or 2 levels of centralization or decentralization COULD eventually satisfy the demand. Other factors need to be considered.					

Technical and management characteristics

G	Tech of STOVE itself (ND = Natural Draft)	Electronic components require industrial capacities. ND is anywhere.		Replication of excellent stove technology is possible in small industry everywhere.		Simple / old ICS tech is not sufficient	Low tech & no tech; Need user education
H	Tech of PRODUCTION of Tier 3 & 4 stoves	Tiers 3 & 4 are not dependent on the size of the production entity IF the stoves are appropriately made.				Might do assembly and support	Only low Tier stoves; Some built in homes
I	Bus. management	Highly required (or funding denied)		“Too expensive”	Variable quality	Usually weak	Lacking
J	Product uniformity and appearance	Highly uniform, with attention to appearance			Design drift even with templates	Struggle for uniformity	Individualized
K	Product quality is <u>not</u> defined by centrality	Poor products can be mass produced			Possible variations to suit local needs		Exceptional work-manship is possible
L	Mechanization	Very high	high	Variable	Medium to variable	Low (artisanal)	Low to none
M	Durability/ maintain.	Generally longer life but often cannot be repaired /maintained			Repairs extend life considerably, or very inexpensive and discard		
N							

Financial and social characteristics

O	Money needed	Very substantial	Substantial	Between high & low	Moderate	Modest to low	Almost none
P	Access to funding	Favored by investors		Seldom seen	Favored by NGOs and small projects		Self funded
Q	Profit vs Social impact	Profit required; social secondary	Profit virtually required		Social benefits are important and help justify “sustainability.”		Must satisfy social needs of household
R	Transportation costs to reach users	High, but reduced by volume		Relatively low, and in-country	Favorably low.		Almost zero
S	Materials costs	Highly variable depending on situation				Higher low volume	Low “scrap” costs
T	Labor costs	Low per unit					Low per unit
U	Job creation	Fewer jobs per 1000 units; not local				Many local jobs; often low skill levels	
V	Stove price to user	Subsidies (including grants) distort realities				Donors and poverty wages distort realities	
W	Nation building	Payment overseas		Should be high			Perpetuates poverty
X							

[Observation by PSA: There seems to be a lack of information and project activity in the National and District/Province columns.] [See also Roth, ETHOS, 2011.]